

**We Claim as Our Invention:**

1 A system for suppressing instabilities in an optical wavelength division multiplex ring network, the system comprising:

5 a first filter device inserted in an optical conductor of the ring network, the first filter device having a low stop-band attenuation only for individual optical signals which are in transmission channels, and further having a high-band attenuation outside the transmission channels in an entire wavelength range critical for the instabilities; and

10 a second filter which combines the individual optical signals with, if determined to be appropriate, launched optical signals so as to form one wavelength division multiplex signal.

2. A system for suppressing instabilities in an optical wavelength division multiplex ring network as claimed in claim 1, wherein both the first filter device and  
15 the second filter device are incorporated into a single module, an output of the first filter device being connected to an input of the second filter device.

3. A system for suppressing instabilities in an optical wavelength division multiplex ring network as claimed in claim 1, wherein at least the first filter device  
20 has one of a BULK filter structure and an AWG filter structure.

4. A system for suppressing instabilities in an optical wavelength division multiplex ring network as claimed in claim 1, wherein the first filter device is a

wavelength division demultiplexer, and the second filter device is a wavelength division multiplexer.

5. A system for suppressing instabilities in an optical wavelength division  
5 multiplex ring network as claimed in claim 4, wherein the system is provided in a  
network node of the ring network.

6. A system for suppressing instabilities in an optical wavelength division  
multiplex ring network as claimed in claim 4, wherein the system is provided in a  
10 network node of the ring network and is designed as an add-drop device.

7. A system for suppressing instabilities in an optical wavelength division  
multiplex ring network as claimed in claim 1, wherein the entire wavelength range  
includes at least the wavelength of 1.53  $\mu\text{m}$  to 1.565  $\mu\text{m}$ .

09304400:030701